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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/620,521	07/20/2000	Theodor Abels	964-001183	2919

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EXAMINER
TRAN, DALENA

ART UNIT	PAPER NUMBER
3661	

DATE MAILED: 10/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/620,521	ABELS ET AL.	
	Examiner	Art Unit	
	Dalena Tran	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 July 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5 and 7-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5 and 7-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Notice to Applicant(s)

1. This office action is responsive to the amendment filed on 7/29/02. Claims 1-3,5, and 7-15 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1,3,5,7-8, 10-13, and 15 are rejected under 35 U.S.C.103(a) as being unpatentable over Avitan (6,050,770), in view of Rath (4,964,679), Wiegardt et al. (4,518,044), and Uehara et al. (5,929,388).

As per claim 1, Avitan discloses an industrial truck, comprising: a plurality of wheels, a load lifting and a drive system (see column 5, lines 12-57; and column 6, lines 33-67). Avitan does not disclose wheel load sensors. However, Rath discloses a stabilizing device configured to prevent tipping of the truck and comprising a plurality of wheel load sensors, each load sensor connected to an individual wheel and configured to measure a wheel load (see columns 2-3, lines 56-8), and a monitoring device, wherein the load sensors are connected to the monitoring device which is configured to control or regulate at least one of the load lifting system and the drive system of the truck based on the wheel load sensor data (see columns 3-4, lines 21-50). Avitan and Rath do not disclose a speed of rotation sensor. However, Wiegardt et al. disclose wherein at least two wheels of the truck have a speed of rotation sensor connected to the monitoring

device (see column 4, lines 8-24). Avitan, Rath, and Wiegardt et al. do not disclose integrated wheel load sensor. However, Uehara et al. disclose wherein the truck includes a front axle and at least one wheel on the front axle of the truck has a wheel bearing with an integrated wheel load sensor (see columns 2-3, lines 53-59; and columns 4-5, lines 42-34). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Avitan by combining a plurality of wheel load sensors are connected to the monitoring device, a speed of rotation sensor, and an integrated wheel load sensor for effectively control running attitude of the truck lifting to maintain stability when the truck is lift heavy load or in high position lifting; therefore, to prevent excessive wheel slippage or prevent tipping of the truck during certain adverse conditions.

As per claim 3, Avitan does not discloses wheel load sensors are provided on all the wheels of truck. However, Rath discloses wheel load sensors are provided on all the wheels of truck (see columns 2-3, lines 57-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Avitan by combining wheel load sensors are provided on all the wheels of truck to detect all the load conditions of wheels thereby can compare load of each wheel to each other therefore can detect any tip over of the unbalance side of the truck, and can accurately stabilize the truck lifting system.

As per claims 5 and 15, Avitan discloses the monitoring device includes an evaluation unit configured to determine at least one of transverse tipping forces, longitudinal tipping forces, tipping moments, and load weight (see the abstract; and columns 9-10, lines 49-8).

As per claim 7, Wiegardt et al. disclose each speed of rotation sensor is integrated into a wheel bearing (see column 4, lines 8-23).

As per claim 8, Avitan discloses the monitoring device includes an evaluation unit configured to measure the speed of the truck (see column 9, lines 3-48).

As per claim 10, Avitan discloses the industrial truck is a counterbalanced fork lift truck (see columns 2-3, lines 66-13).

As per claim 11, Avitan does not discloses two wheels with the speed of rotation sensors are located on the same axle. However, Wiegardt et al. disclose the two wheels with the speed of rotation sensors are located on the same axle (see columns 6-7, lines 55-26). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Avitan by combining speed of rotation sensors are located on the same axle for stabilizing the truck lifting system.

As per claim 12, Avitan does not discloses wheel load sensors. However, Rath discloses the wheel load sensors are provided on all the wheels of the trucks (see columns 2-3, lines 57-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Avitan by combining wheel load sensors are provided on all the wheels of the trucks for detecting the loadage and the total weight being carried by the truck thereby to detect a stable condition of the vehicle.

4. Claims 2,9, and 14, are rejected under 35 U.S.C.103(a) as being unpatentable over Avitan (6,050,770), Rath (4,964,679), Wiegardt et al. (4,518,044), and Uehara et al. (5,929,388) as applied to claim 1 above, and further in view of Yuki et al. (4,520,443).

As per claim 2, Avitan, Rath, Wiegardt et al., and Uehara et al. do not disclose the monitoring device is connected with actuator units. However, Yuki et al. disclose the monitoring device is effectively connected with actuator units for at least one of inclination of a lifting mast,

adjusting the height of a load, adjusting vehicle speed, adjusting vehicle acceleration, adjusting braking intensity, and adjusting steering angle (see the abstract; and columns 6-7, lines 5-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Avitan, Rath, Wiegardt et al., and Uehara et al. by combining actuator units for at least one of inclination of a lifting mast, adjusting the height of a load, adjusting vehicle speed, adjusting vehicle acceleration, adjusting braking intensity, and adjusting steering angle for maintaining the vehicle in a stable state in accordance with the load weight and the load height during lifting or transportation of objects.

As per claim 9, Avitan, Rath, Wiegardt et al., and Uehara et al. do not disclose the monitoring device is connected to a display unit. However, Yuki et al. disclose the monitoring device is connected to a display unit for displaying at least one of a load, a load moment, a truck speed, an acceleration, a turning radius, and tipping forces (see columns 5-6, lines 39-4; and columns 13-14, lines 32-7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Avitan, Rath, Wiegardt et al., and Uehara et al. by combining a display unit for displaying at least one of a load, a load moment, a truck speed, an acceleration, a turning radius, and tipping forces for helping an operator read a load weight or lifting condition of the truck, so the operator can easily piling and unloading the load at the predetermined position.

As per claim 14, Avitan discloses the monitoring device includes an evaluation unit configured to determine at least one of transverse tipping forces, longitudinal tipping forces, tipping moments, and load weight (see the abstract; and columns 9-10, lines 49-8).

Remarks

5. Applicant's argument filed on 7/29/02 has been fully considered and they are deemed to be persuasive. However, upon updated search, the new ground of rejection has been set forth as above.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 703-308-8223. The examiner can normally be reached on M-F (7:30 AM-5:30AM),off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski can be reached on 703-308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

TAN Q. NGUYEN
PRIMARY EXAMINER

/dt
October 16, 2002